



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,087	08/06/2001	Toby J. Miles	84185 2803TAL	8730

20736 7590 07/03/2002

MANELLI DENISON & SELTER
2000 M STREET NW SUITE 700
WASHINGTON, DC 20036-3307

EXAMINER

DAVIS, OCTAVIA L

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 07/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/922,087

Applicant(s)

Miles et al

Examiner

Octavia Davis

Art Unit

2855



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Serial Number: 09/922, 087

Art Unit: 2855

6/29/02

DETAILED ACTION

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim Objections

Claim 32 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claims to place the claims in proper dependent form, or rewrite the claim in independent form.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 - 38 are rejected under 35 U.S.C. 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

In claim 1, lines 8 and 11, “ in operation ” is vague and indefinite.

In claim 6, line 3, “ via ” is vague and indefinite.

In claims 14 and 24, lines 13, 14 and 31, “ and/or ” is vague and indefinite.

Claim 14 does not clearly state that this is a method claim, but merely refers to intended use of subject matter in a method. A method claim should positively recite the word “ step ”. Thus, it is suggested to insert “ the steps of ” after “ comprising ”. See 35 U.S.C. 112, 6th paragraph.

In claims 1, 9, 32, “ arranged to receive ”, “ arranged to surround ” do not define structures.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owen et al in view of Aubert and Hettiarachchi et al. Owen et al disclose a fatigue testing device comprising a frame, first and second clamping means 18 for holding a specimen, mounting means 14 to mount the first and second clamping means 18 on the frame, the mounting means isolating the clamping means from the frame, means for removing a respective clamping means (See Col. 6, lines 61 - 66), means for measuring the low cycle load, vibration excitation means 36 coupled to a respective clamping means 18, means for measuring a high cycle load (See Col. 8, lines 15 - 44) detector 62 means detecting vibration of the specimen 18 and control means 31 determining a resonant frequency of the specimen from an electrical signal and sending a signal to the vibration excitation means (See Cols. 8 and 10, lines 1 - 5 and 58 - 64) (cls 1, 11, 14, 21 and 24), the mounting means comprising a network of springs and masses (See Col. 5, lines 62 - 67) (cls 2 and 25), the resonant frequency of the mounting means 14 and the clamping means 18 being lower than the resonant frequency of the specimen (cls 3 and 26), the vibration excitation means comprising

a piezoelectric actuator 16 (See Col. 8, lines 9 - 44) (cls 4, 7, 27 and 30), the actuator generating frequencies in a specific range (See Col. 9, lines 1 - 7) (cls 5 and 28), a drive member 35 coupling the actuator 16 to the clamping means 18 (cls 6 and 29), electrical insulating means electrically insulating the frame from the specimen (cl 10), applying tensile load and bending mode vibrations on the specimen (See Col. 8, lines 56 - 67) (cls 15 and 16), the specimen having a specific shape (See Fig. 2) (cl 17) and determining the amount of energy required to vibrate the specimen at a predetermined amplitude of vibrations (See Col. 8, lines 1 - 14) (cl 22, 36 and 37) but does not disclose probes arranged on opposite sides of a crack on the specimen, means for determining the crack growth rate in the specimen stopping the test and locating the crack, resuming the test and maintaining the vibrations at its resonant frequency and means for supplying electrical current through the specimen (cls 1, 11, 14, 21 and 24), storing the life of the specimen to the initiation of the first crack and to failure (cls 12, 13, 19, 33 and 34), heating the specimen to oxidize and color the surfaces of the crack in the specimen, the heating means comprising a furnace surrounding the specimen (cls 8, 9, 18, 20, 31, 32 and 35) and the specimen comprising a damping treatment (cls 23 and 38). However, Aubert discloses a device and process for the measurement of the extent and temperature of a crack at the surface of a body comprising means for determining the crack 11 growth rate in a specimen 10, stopping the test using means 27 and locating the crack, resuming the

test and maintaining the vibrations at its resonant frequency (See Cols. 3 and 4, lines 14 - 17 and 16 - 25) and means for supplying electrical current through the specimen (cls 1, 11, 14, 21 and 24), storing the life of the specimen to the initiation of the first crack and to failure (cls 12, 13, 19, 33 and 34) and heating the specimen to oxidize and colour the surfaces of the crack in the specimen 10, the heating means comprising a furnace 12 surrounding the specimen (See Col. 4, lines 26 - 34) (cls 8, 9, 18, 20, 31, 32 and 35) and the specimen comprising a damping treatment (cls 23 and 38).

Hettiarachchi et al disclose a method and apparatus for detection of crack initiation comprising removable samples 34, 48, subject to cracking, provided with a load cell 22, the sample 34 being held between a coupling 36 and a supporting plate 32 and being situated in an autoclave 14 which is heated (See Col. 4, lines 26 - 57) (cls 14 and 24).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify Owen et al according to the teachings of Aubert and for the purposes of, simultaneously measuring the extent and the temperature of an open crack at the surface of an electrically conductive solid body without using an external thermocouple and detecting an onset of stress corrosion cracking in materials.


Any inquiry concerning this communication should be directed to Examiner Octavia Davis at telephone number (703) 306 - 5896. The examiner can normally be

reached on Monday - Friday (9:00 - 5:00), alternate Mondays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0956.

JP

OD/2855


Benjamin R. Fuller
Supervisory Patent Examiner
Technology Center 2800